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ABSTRACT

Despite expanded services, less than one tenth of one per cent of today's total production of reading material is available to the blind or visually handicapped in a form (large print, recorded or tactile) that they can use. As more and more blind people take their place in the trades and professions, the production of quality materials must keep pace. In answer to a widening need for the development of standards for the production of these reading materials, the National Accreditation Council's Commission on Standards gave first priority to the project when undertaking to fulfill its responsibility for updating, refining and expanding the basic standards encompassed by the Commission on Standards and Accreditation of Services for the Blind (COMSTAC). Agencies or groups producing reading materials in any or all of the three forms will find this study a useful adjunct to "The Comstac Report." In addition to improving the quality and variety of materials produced, it aims to increase efficiency and cut down on duplication by encouraging central reporting and interagency cooperation in cataloging and exchanging materials. (Author/NH)

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Standards
for
Production
of
READING MATERIALS
for the
Blind and Visually Handicapped

Reverend Thomas J. Carroll
Project Chairman

Professor Ray L. Trautman
Project Director

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NATIONAL ACCREDITATION COUNCIL
for Agencies Serving the Blind and Visually Handicapped
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Preface

Bound by old concepts of dependence, many blind people, and the agencies serving them, have hesitated to accept professional guidance which has been aimed toward freeing each blind person to develop his full potential as a human being. Gradually, as more and more blind persons have gained confidence to venture into the world of the sighted, the way has become easier for the next to follow.

But outmoded practices and complacent attitudes have continued to slow the rate of progress.

To consolidate advances and to hasten the process of liberation from old ideas and habits, the American Foundation for the Blind created an independent national commission to pursue two goals:

1. To set up standards for work with the blind;
2. To recommend a permanent program for implementing and promulgating such standards.

Thus, in 1963, was born the Commission on Standards and Accreditation of Services for the Blind. As chairman of this volunteer Commission (widely known by its acronym, COMSTAC), I was privileged to work with 135 outstanding men and women, professionals and laymen, from every corner of the country. Directly or indirectly, the Commission was concerned with every type of service for the blind and visually handicapped.

Five basic functions of administration and seven service programs were chosen by the Commission as areas most urgently needing standards. The resulting work, THE COMSTAC REPORT: *Standards for Strengthened Services,* underwent meticulous review and evaluation by teams of knowledgeable persons at every stage of development. As finally published, in 1966, THE COMSTAC REPORT represented a distillation of the experience and thinking of well over one thousand informed and concerned persons.

The Commission had achieved its first goal: the establishment of standards. The second major goal was reached by a similar process of evaluation, review and refinement. Its proposals for the structure, financing and operation of a permanent group to initiate and administer a system of voluntary accreditation became the blueprint for the National Accreditation Council.

Chartered by the State of New York as a nonprofit corporation, the Council began operations in January 1967 under the able direction of Alexander F. Handel who had so successfully provided staff leadership to COMSTAC. The Council has moved rapidly since its founding to implement the accreditation program as a major vehicle for improving the quality and quantity of services for blind and visually handicapped persons throughout the country. Two interrelated commissions operate to fulfill this program:

1. The Commission on Accreditation (which formulates accreditation policies, methods and procedures, and acts on applications from individual agencies);
2. The Commission on Standards (which refines and updates the existing standards used in the accreditation process and develops comparable standards in additional areas).

Service programs covered by COMSTAC were: education, library service, orientation and mobility, rehabilitation centers, sheltered workshops, social services and vocational services.

In response to a growing need for standards in another service area —the production of reading materials (in large print, recordings and braille) for the visually handicapped—the Council set in motion the special project which has resulted in the present volume.

In formulating standards for large print materials, the project committee took into account the fact that the use of low vision aids accomplishes the same purpose — enlargement of the original ink print material. It is well recognized that low vision aid services need to be expanded greatly to serve all parts of the country. At the same time it was concluded that large print materials do serve a valid purpose and it is felt appropriate to present standards aimed at improving their quality along with materials in recorded and braille forms. It is the Council's intention in publishing these standards to provide an impetus toward raising production standards in all media that may be used by visually handicapped readers.

It is hoped that this, the Council's first standard-setting effort since publication of THE COMSTAC REPORT, will contribute significantly to helping blind and visually handicapped individuals to lead fuller lives.

Arthur L. Brandon
President

Lewisburg, Pennsylvania
September 1970

Introduction

To inform, to entertain, to transport to another land — or into the mysteries of another mind — the written word satisfies a myriad of needs.

Yet to many Americans who are blind or visually handicapped (about one million) this seemingly obvious pleasure may be denied. Indeed, according to Paul L. Berry, Director, Reference Department, Library of Congress, a fundamental "right" is:

> The right to read . . . a right of availability to reading matter, encompassing a number of subsidiary rights: the right of access to reading material that is adequate both in quantity and in scope; the right to reading material of high quality, both in content and in format; the right to proper training in reading skills; and the right to professional guidance in the selection and dissemination of reading materials . . .[1]

Congress first took note of the need for special reading materials in 1879 when it voted an annual subsidy to enable the American Printing House for the Blind to publish and distribute free braille textbooks to schools for the blind. A generation earlier, in 1858, the State of Kentucky had chartered the Printing House to produce textbooks for the same purpose.

By 1897, the Library of Congress had set aside a special reading room and in 1904 began the free mailing of books for the blind. It was not until 1931 that the Library was enjoined to "provide books for the use of the adult blind of the United States." More than 20 years later, in 1952, the word "adult" was deleted so that children could also benefit from the program.

Further appropriations have extended the service to include recorded materials on discs and tape as well as braille and large type. Distribution to qualified users is arranged through a network of federal, state, regional and local libraries.

Despite these expanded services, less than one tenth of one per cent of today's total production of reading material is available to the blind or visually handicapped in a form (large print, recorded or tactile) that they can use.

[1]From the keynote address presented at the Conference on Standards for the Production of Reading Materials for the Blind and Visually Handicapped, Chicago, April 23, 1970.

The "right to read," either for pleasure, for vocational advancement, or for elementary, secondary or college education, consequently remains extremely limited. As more and more blind people move to take their place in the trades and professions, the production of quality materials must keep pace. And since one blind person may be interested in the technical details of manufacturing plastic widgets, another, in the abstract concepts of the universe, or the delightful intricacies of detective stories, the subjects available must cover a wide range of human knowledge and experience, both fact and fiction.

Additionally, since one blind or visually handicapped person may be able to read large print while another may need braille or recordings, diversified materials must be available in all three media. Attempts to meet the demands for popular current general literature are largely being made through commercially produced large print books, nonprofit press made braille books and through the Talking Book program of the Library of Congress.[2]

It is on hundreds of organized groups and several thousands of unpaid volunteers that the blind person must mainly rely for specialized textbooks, cookbooks, professional and vocational literature. Without the volunteer, certified by the Library of Congress, who undertakes to hand transcribe reading material by means of a braillewriter or with stylus and slate, a braille-reading student would often be at a loss. Readers who make recordings at home or through an agency, typists who produce large print books, proofreaders, monitors and other volunteers who bind and catalog material all play a vital part in opening a window on the world for each blind person they serve.[3]

For all blind and visually handicapped people and those who work with them, the publication of THE COMSTAC REPORT: *Standards for Strengthened Services* was a significant milestone.[4] In addition to stand-

[2]See "Sources of Reading Materials for the Visually Handicapped," a series of pamphlets published in 1970 by The American Foundation for the Blind, 15 West 16th Street, New York, NY 10011.

[3]See *Volunteers Who Produce Books: Braille, Large Type, Tape* (1970), published by the Library of Congress, Division for the Blind and Physically Handicapped, 1291 Taylor Street N.W., Washington, DC 20542.

[4]THE COMSTAC REPORT: *Standards for Strengthened Services* (1966), National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, 79 Madison Avenue, New York, NY 10016.

ards for seven key service programs, COMSTAC codified standards for major administrative functions which are common to any agency: function and structure; financial accounting and service reporting; personnel administration and volunteer service; physical facilities; public relations and fund raising.

In answer to a widening need for the development of standards for the production of reading materials, the Council's Commission on Standards gave first priority to the present project when undertaking to fulfill its responsibility for updating, refining and expanding the basic standards encompassed by COMSTAC.

Agencies or groups producing reading materials in any or all of the three forms will find the present study a useful adjunct to THE COMSTAC REPORT. In addition to improving the quality and variety of materials produced, it aims to increase efficiency and cut down on duplication of effort by encouraging an improved system of central reporting and interagency cooperation in cataloging and exchanging materials. And it carries forward a guiding principle of COMSTAC: constant awareness that agencies and all who work with blind people must seek the active participation of users and remain ever responsive to their needs and wishes.

Agencies which provide library service in addition to producing reading materials, will want to refer to THE COMSTAC REPORT, Section S-2 which deals specifically with library services. Agencies giving any of the six additional services will find applicable standards in other sections. Of basic applicability to any agency are the standards on administration mentioned above.

As a supplement to THE COMSTAC REPORT, it was deemed essential that the standards for the production of reading materials be subjected to the same rigorous process of development as was pursued in preparing the REPORT itself. The Reverend Thomas J. Carroll, Director of Professional Policy and Development, Catholic Guild for All the Blind, Newton, Massachusetts, a member of the Council's Commission on Standards, agreed to serve as chairman of the project which undertook this task.

Under Father Carroll's leadership, four committees, composed of administrators, technicians, specialists and users, active in the various media, were chosen to formulate and codify standards for production in large print, recorded and tactile (braille) forms. The assignment included establishment of general policies and principles applicable to production in all three media.

The following general principles which guided COMSTAC also directed the work of the committees:

- Standards should set a level of performance which no agency should fall below; a level which better agencies can accept as a challenge to strive for improvement.
- Standards should be based on existing knowledge tested in practice; future revisions may be based on new knowledge gained by research or experience.
- Standards should be reached by consensus evolved from pertinent professional literature, direct experience of committee members, and the opinions of others the committees might wish to consult.
- Standards for qualifications of professional and technical personnel should meet those adopted by recognized organizations in their respective fields.
- Standards should be clearly defined and should include enough detail to make them useful tools for agency self-evaluation.
- Cooperation and help should be actively sought from pertinent standard-setting and accrediting groups in order to gain the immediate benefit of their experience and to lay a base for possible reciprocity in the future.

In February of 1969, the project committees began detailed discussions on the specific standards. Preliminary work included inspection of samples of reading materials in the various media as well as on-the-spot observation of methods of production. Consideration was also given to the policies and principles which relate to all.

Considered during the intensive working sessions that led to preparation of the first drafts were questions such as the following: the qualifications and supervision of volunteers; the role of proofreading or monitoring in quality control; certain technical characteristics of a good product; the central registration and reporting of titles; the role of consumers in selection and evaluation of materials; the differences between "mass" and individually produced materials.

Also taken into account was the fact that large print and low vision aids both result in an enlarged image helpful to many partially sighted persons. The need for greatly increased use of low vision aids is acknowledged. It is also recognized that many persons, particularly certain students and many older persons, prefer books in large print. Therefore, it was deemed appropriate to formulate standards for those agencies which produce large print materials, although it was recognized that low vision

aid services need to be made available to many more visually handicapped persons in order that they may have access to the greatest amount of materials in print form.

The resultant draft of standards received full review at a special conference held in Chicago on April 23-24, 1970. Providing a broad base of advice and counsel on the soundness and applicability of the standards were nearly 200 participants representing a wide range of interested groups, users, volunteers, educators, agency administrators and technicians, distributors, and commercial producers of large print books.

Lively and thorough discussions led by committee personnel attested to the deep interest and knowledgeability of the participants. Valuable suggestions were received, reviewed and incorporated by the various committees in preparation of the final draft of the standards which was submitted and approved by the Council's Commission on Standards in July, 1970.

These meticulous efforts to codify the best techniques and methods in use today received substantial encouragement from Paul L. Berry, who declared in his keynote address on "The Right to Read" at the April 1970 conference:

> Out of your deliberations should come some very practical standards which, when adopted, can establish quality levels for the major types of reading materials—large print, recorded and tactile—whether produced by agencies, organizations or individuals. The development and acceptance of these standards, and their implementation through the work of the National Accreditation Council, will do much to accomplish the objective of high quality in these important reading resources . . .

The "high quality" today's blind people have a right to expect can, however, only be maintained by continual evaluation and revision to keep pace with new methods and advances in technology.

For example, visually handicapped people who can read large print may look to the not too distant day when technological developments may make it possible for them to read ordinary print with ease. Computerized production of braille is constantly improving and may one day open a wealth of material previously accessible to the braille reader only on a limited basis. And the imminent adoption of tape cassettes, it is anticipated, will add substantially to the convenience with which recorded materials may be used.

Meanwhile, any agency producing reading materials can, by striving to meet or exceed the present standards, raise its own level of performance and help meet a vital need for each blind and visually handicappd person it serves today.

Full benefit, however, can best be obtained through use of these standards as an adjunct to THE COMSTAC REPORT and through application to the National Accreditation Council for accreditation and membership. Some independently organized volunteer groups may lack the administrative structure outlined by COMSTAC and may, therefore, not be encompassed, at present, by the accreditation program. Nevertheless, the standards are intended to be helpful guidelines for *any* group which produces reading materials for blind and visually handicapped persons.

Primary tools for putting standards into action and for gaining creditation are the Council's various self-study and evaluation guides.[5] These guides are valuable planning instruments in themselves. When used with accreditation as a goal they become doubly meaningful.

The accreditation process begins with an agency's study and evaluation of itself based on the above mentioned guides covering each administrative and applicable service area. Next, the agency submits its report to the Council and asks for an on-site review. If the application is accepted, a professionally qualified team appointed by the Council conducts a three-day on-site review. This professional review, which evaluates an agency in the light of its own stated purposes and objectives, is intended to validate the agency's own findings and to generate fresh ideas and approaches to improving services.

During the on-site review, the team makes an evaluation of the services provided by the agency and of the administrative activities necessary to support the delivery of services. This evaluation is accomplished by various means, including firsthand observation of services and facilities, interviews and discussions with staff members, review of records, manuals and other written materials including, when appropriate, samples of reading materials produced for the blind.

The team's report is checked by the agency for factual content and is then submitted, together with the self-study report, for consideration

[5] The three guides available from the National Accreditation Council are:

(a) SELF-STUDY AND EVALUATION GUIDE (for multiservice agencies);
(b) SELF-STUDY AND EVALUATION GUIDE FOR SHELTERED WORKSHOPS (for agencies which provide only sheltered workshop service) and;
(c) SELF-STUDY AND EVALUATION GUIDE FOR RESIDENTIAL SCHOOLS, all published in 1968.

Published simultaneously with this volume is a supplement to (a) the SELF-STUDY AND EVALUATION GUIDE, entitled "Section D-7, Production of Reading Materials" incorporating the standards in this volume.

by the Commission on Accreditation. Accreditation may then be approved, postponed or denied. Any unfavorable action is never publicized. If accreditation is denied or deferred, the agency is advised on steps it may take to have the decision reconsidered.

Accreditation is a fresh public recognition of an agency's leadership. It may well bring with it an increased base of public support. Most importantly, it signifies that an agency is actively sharing in the dynamic nationwide pursuit of more extensive and better services for blind and visually handicapped citizens.

The most recent forward step in that pursuit is the publication of this volume. May it encourage agencies now producing materials to improve their output, and spur others to begin a program to make the "right to read" a reality for all who seek it!

To keep that "right" as an ever-expanding reality—today and tomorrow—the Council, through its Commission on Standards, is committed to conducting, at appropriate intervals, systematic revisions of its standards. As these standards are tested by use, and in the light of further research and technological applications, the Council invites suggestions for changes so that the accreditation process may benefit from standards which reflect improved practices and methods.

J. M. Woolly, *Chairman*
Commission on Standards

Little Rock, Arkansas
September, 1970

Acknowledgments

The formulation of these standards for the production of reading materials would not have been possible without the devoted effort and generous contribution of time, knowledge, funds and facilities offered by countless technicians, specialists, users and agencies across the nation.

As chairman of the project, I want to express my profound gratitude to each of the many persons who helped to bring it to successful and speedy completion within two years of inception. Special thanks for their enthusiastic dedication and judicious direction must go to each of the committee chairmen: Dr. Robert W. Mann, Professor of Mechanical Engineering, Massachusetts Institute of Technology; Robert S. Bray, Chief, Division for the Blind and Physically Handicapped, Library of Congress; Don Staley, Executive Director, Recording for the Blind; and Dr. Berthold Lowenfeld, Chairman of the Advisory Council to the Braille Authority.

The valuable contributions of each committee member (see page vi) cannot be overestimated. All brought a deep sense of commitment to the work and freely gave long hours, often nights and weekends, to codify their knowledge into working papers for consideration and reconsideration by their respective committees.

Major credit for the smooth coordination of each committee's work must go to Ray L. Trautman, Professor of Library Services, Columbia University, who served as project director.

For effective handling of administrative details, efficient management of the Chicago conference which reviewed the preliminary draft of the standards, and for basic editorial work, thanks go to project coordinator Huesten Collingwood of the Council staff.

To all who came to the conference, many at their own expense, and shared their expertise in the intensive working sessions, a special debt of gratitude is owed. Appreciation goes, too, to the volunteers, provided by the Johanna Bureau for the Blind and Visually Handicapped, who helped man the conference registration desk.

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Note must also be made of the indirect support given by several organizations which donated staff time and paid travel expenses of additional staff specialists not covered by the project budget. Thanks for opening their facilities to project personnel for observation and for providing meeting space goes to a number of agencies. These include: American Association of Workers for the Blind; American Foundation for the Blind; The Catholic Guild for All the Blind, Newton, Massachusetts; Clovernook Printing House for the Blind; The Jewish Guild for the Blind, New York City; Minnesota State Services for the Blind; and Recording for the Blind.

Substantial credit for help in formulating the overall project design belongs to Miss Anne L. New of the Council staff; and to Miss Patricia Cavanaugh, writer, editor and designer, for help in piloting this volume off the press. Attention must be given also to the excellent secretarial work done by Council staffer Miss Anne L. Russo, and to the valuable assistance volunteered by Miss Jane Sommerich in preparing mailings and compiling the list of periodicals, publishers and reference sources in this volume.

Thomas J. Carroll
Project Chairman

Newton, Massachusetts
September, 1970

1.

GENERAL POLICIES

AND

PRINCIPLES

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1. GENERAL POLICIES AND PRINCIPLES

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1. General Policies and Principles

The following statements of general policies and principles are to be considered integral parts of the standards for production in all three forms, large print, recorded and tactile (braille). In some cases, such as proofreading and monitoring, the general policies and principles which should be observed are enumerated here and in each of the three parts on production standards. This is necessary because of differences in application among the different media.

1.1 SELECTION OF MATERIALS FOR TRANSCRIBING AND REPRODUCTION. Blind and visually handicapped readers have an inalienable right to have access to reading materials available to the general public. Agencies which produce reading materials for the blind and visually handicapped also have the right and obligation to determine and state their philosophy and purposes in terms of the kinds of materials they produce.

1.1.1 Title selection procedures facilitate the right of blind and visually handicapped readers to have access to printed materials equal to that afforded the general public.

1.1.2 Within the scope of its stated functions and purposes, the agency does not exercise censorship by declining to produce particular works, or by abridging, deleting or editing materials in any way to "protect" users from objectionable materials or improper language.

1.2 COPYRIGHTS AND PERMISSIONS. In view of the fact that publishers are generally unable or unwilling to undertake to supply copies of their works in large print, recorded and tactile forms, it would appear that transcription and production of a single copy by a nonprofit agency, governmental service or volunteer group comes within the doctrine of "fair use" in the present copyright law. This doctrine of "fair use" is interpreted to mean that permission from the copyright owner(s) is not needed to produce a single copy. (It should be noted that a revision of the copyright law is under consideration by the U.S. Congress as this is written.) The following policies and procedures apply to the production of more than one copy.

1.2.1 For *general library materials* transcribed in more than one copy, in recorded or braille forms by volunteers, copyright clearance is obtained through the Division for the Blind and Physically Handicapped of the Library of Congress.[1]

1.2.2 For volunteer production of more than one copy of *textbooks*, in large print, recorded and braille forms, copyright clearance is obtained through the American Printing House for the Blind.[2]

1.2.3 In all other instances, copyright permission for reproducing more than one copy is obtained directly from the copyright owner(s).

1.2.4 Appropriate acknowledgment to the copyright owner(s) is contained in all works transcribed.

1.3 **PROOFREADING AND MONITORING.** The importance of providing blind and visually handicapped readers with material which is faithful to the original can scarcely be overstressed. Proofreading and correction of errors is a most important procedure in producing materials with a minimum of errors. The procedures which apply to production in each medium are set forth in the subsequent parts of this document.

1.3.1 When a compelling reason, such as a student's immediate need for particular educational material, does not permit time for proofreading and correction of errors, the work carries a notation in the same medium that it has *not* been proofread.

1.3.2 After the immediate need has been met, the work is proofread and corrected before it is duplicated or recirculated.

1.4 **CENTRAL REPORTING.** In the interests of providing efficient services and safeguarding economy of effort and funds, it is highly desirable that producers and distributors of reading materials for the blind and visually handicapped be able easily to exchange information about the completed works they have available whether in large print, recorded or braille forms.

Central catalogs greatly facilitate determining whether a needed title is available, what a copy would cost, and how long it would take to acquire one. At the present time, a unified system of cataloging all book titles does not exist; however, included among the following

[1] Division for the Blind and Physically Handicapped, Library of Congress, 1291 Taylor Street N.W., Washington, DC 20542.
[2] American Printing House for the Blind, Box 6085, Louisville, KY 40206.

production standards are specific reporting agencies which provide a centralized catalog service for certain types of materials.

Works which are individually transcribed in their entirety, and in accordance with the production standards contained in this document should be reported, as appropriate, to the centers identified under the various media, large print (2.19.2), recordings (3.5.2 and 3.5.3), and braille (4.7.2 and 4.7.3).

1.4.1 The agency has clear, written policies and procedures about clearing with the available central reporting services before undertaking production of a book, and if the agency undertakes to transcribe the work because it is unavailable elsewhere in the needed form, it reports production of the title to the appropriate reporting center.

1.4.2 Only complete works which are produced in accordance with the appropriate production standards contained herein and which can be copied are so reported.

1.5 **DUPLICATION OF MASTER COPIES.** Inherent in an efficient nationwide system of producing books in large print, recorded and tactile (braille) forms, is the capability to secure and distribute copies to readers who need them. This is particularly true for educational materials which are essential for students to complete specific courses. An agency which produces such books should have the ability either to reproduce upon request of another agency or to deposit a master copy with a central depository which has the resources to make a duplicate, or both. While there is no central depository for large print masters at this time, there are resources which will accept for deposit and reproduction educational materials in braille (4.19.5.1 and 4.19.5.2) and on tape (3.5.2 and 3.5.3).

1.5.1 Provision is made for the duplication of copies, either directly by the organization responsible for the original production or through cooperative arrangements with other organizations possessing the necessary resources.

1.5.2 A policy is established, in writing, concerning charges, if any, to be made for providing duplicated copies.

1.6 **PARTICIPATION BY USERS.** Programs and services designed for any group or segment of the population may be doomed to failure unless a full and open relationship is maintained between the responsible agency and those it tries to serve. This is no less true for agencies which produce reading materials in large print, recordings and braille for the blind and visually handicapped.

While the numbers and characteristics of individuals who make use of these reading materials are fairly well known, there are many other individuals who have not made use of the services of agencies which produce these materials. The reasons for nonuse are many and complex.

Producers of special reading materials which are discussed in this document need to make special efforts to remain responsive to the needs and wishes of their users, potential as well as actual. Users should be effectively involved in the organization, planning and policy making functions of the organizations, including title selection, standards for production, and quality control. Procedures should be established to elicit the opinions and experiences of users, and conscious efforts made to identify and meet the needs of those who do not use the services of producing agencies, particularly those blind and visually handicapped persons among the older age groups.

1.6.1 The agency encourages open communication with the persons it serves.

1.6.2 Effective participation of users is sought in the various phases of the agency's operations related to the production of reading materials.

1.6.3 The agency undertakes to be aware of the needs and wishes of its users, both actual and potential, and to keep its production methods and policies relevant to them.

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GENERAL POLICIES AND PRINCIPLES

Library of Congress, *Copyright Law of the United States of America,* Copyright Office, Bulletin No. 14 (Revised to January 1, 1967).

U.S., Congress, Senate, *For the General Revision of the Copyright Law, S. 543, Title 17 of the United States Code for Other Purposes,* 91st Congress, 1st Session, January 22, 1969.

For addresses, consult Directory of Periodicals, Publishers and Reference Sources Mentioned in this Volume, page 59.

2.

LARGE PRINT

MATERIALS

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2. Large Print Materials

Introduction

Two basic methods, both involving enlargement of type, are used to present ink print materials to partially sighted readers. The first method utilizes a properly prescribed optical magnification device called a low vision aid. The second utilizes materials in which the letters are typewritten or printed in greater than normal size referred to as "large type" or "large print."[1]

The relative values and outcomes of each method have been discussed in depth and have been the subjects of extensive research and technological activity. On the simplest level, it is known that ordinary books and reference tools such as standard dictionaries, encyclopedias, atlases and directories can often be made accessible to visually handicapped persons by merely providing simple magnifiers, appropriate lighting and reading stands.

There is a strong body of evidence that properly prescribed and used low vision aids make it possible for persons with vision sufficient to read large print also to read regular size print just as effectively. As the results of further technological advances become available, and as low vision aid services become more extensive, the range of reading materials directly accessible to visually handicapped persons will become greatly expanded as they are able more and more easily to use generally produced materials.

Some fear that proliferation of books in large print may discourage the use of low vision aids. There can be no doubt that it is highly desirable to increase the availability of low vision aid services so that every visually handicapped person who can benefit from optical aids can have them readily available for use.

There is evidence that many persons who use low vision aids effectively for reading brief passages find large print books more satisfying for sustained reading. It is also recognized that for some readers, even after the best currently available optical aids are utilized, large print is

[1]The terms "large type" and "large print" are often used interchangeably, although, technically speaking, large print is the broader term that applies equally to materials produced by typewriting, typesetting and photo enlargement.

the *only* printed matter accessible to them either because they need the combination of large print and optical aids, or because of other physical or emotional reasons.

Only when low vision aids are widely available, however, will visually handicapped readers have a true choice between large print books and ordinary print materials.

Taking the foregoing into account, in particular the need to expand the use of low vision aids, it was concluded that large print materials do have their place, especially for certain students and many older persons. Therefore, these standards were formulated to guide the production of high quality materials.

The standards contained herein do *not* encompass the process of determining the need of a particular individual for books in large print. The "prescription" of large print books for an individual should never be a routine matter. Nor should the reader unnecessarily be conditioned to accept the limitation that he can use only large print, thus restricting him to the limited number of titles available in that medium compared to the much larger quantity in ordinary print

For a visually handicapped student, the decision to make or not to make large print textbooks available is best made by a qualified low vision aid service working in close coordination with the educators responsible for the student's education. The ultimate determination of the place for commercially produced large print books of popular interest will be made by persons, particularly those in the older age groups, who purchase and read them.

Since no two people perceive in exactly the same way, the development of a single set of standards for large type or large print is not a simple task nor is an ideal solution readily available. No one size or type face is ideally suited to *all* readers. For some, type size may bear less relationship to readability than such factors as familiarity with the type style, illumination, contrast, focal distance, width of line, and the spacing of letters, words, and lines or combinations thereof.

Large print materials are produced by volunteers, often in connection with a nonprofit agency or governmental service, and by commercial firms. The size of editions varies from a single copy to many thousands of mass-produced copies. Special large print typewriters are used to produce a single copy or a master which can be reproduced by office copying or offset printing equipment. Another method of production

is photo enlargement of existing copy for reproduction by offset printing. Finally, original typesetting (which includes resetting and original set) can provide the most flexibility of design and format but is economical only when large numbers of copies are required, as is the case for commercial firms.

The following standards attempt to identify the salient factors that affect the appearance, readability and use of large print materials. Standards are set forth separately for each of the three methods of production.

These standards are no substitute for a comprehensive manual on the many details which are involved in the production, particularly by hand transcribing, of large print materials. Samples of manuals now in use are noted in the references following these standards. It is pertinent to note that, as this is written, the National Braille Association is undertaking such a manual, based on nationwide experience, to guide individual transcribers.

General Standards

2.1 GENERAL POLICIES AND PRINCIPLES. All production is accomplished in compliance with the general policies and principles numbered 1.1 through 1.6.

2.2 BOOKS FOR STATE TEXTBOOK COMMISSIONS. To the extent feasible, mechanical specifications for printed materials intended for submission to state textbook commissions are in accord with the current general manufacturing standards and specifications developed by the National Association of State Textbook Administrators.[2]

Hand Transcribing

Materials are hand transcribed by direct typing in large print for single use or for duplication by office copying machines.

2.3 TYPE SIZE. The lower case letter "o" is at least one-eighth inch high (the approximate equivalent of 18 point type), and there are no more than six letters and spaces per horizontal inch.

[2] *Manufacturing Standards and Specifications for Textbooks*, National Association of State Textbook Administrators (1969), c/o Textbook Specifications, 161 East 42nd Street, New York, NY 10017.

2.4 TYPE FACE. Heavy or broad typefaces are used rather than italic or thin faced types in order to enhance readability.

2.5 TYPEWRITERS. Typewriters having upper and lower case letters are used.

2.5.1 Typewriters are well maintained and properly adjusted; the type is kept clean and the copy produced is dark.

2.5.2 When cloth ribbons are used, they are of the extra-heavily-inked variety.

2.5.3 Typewriters adapted and equipped for use with carbon ribbons are used, whenever feasible, for producing master copies.

2.6 PAPER. Paper of appropriate quality, weight, color, reflectance, finish and opacity is used.

2.6.1 The finish is dull, vellum, or non-glare.

2.6.2 The color is white, off-white, or a light tint, but not bright white.

2.6.3 The paper weight is 20 pound bond or 50 pound book stock.

2.6.3.1 For typing and printing on both sides, show-through is minimized by use of a paper which is not less than 24 pound bond or 60 pound book stock, or which has been specially treated to keep show-through at a minimum.

2.6.4 Opacity is at least 91 percent.

2.6.5 Paper is chosen to provide maximum contrast without glare.

2.7 FORMAT. Hand transcribed books for general use are produced on paper 8½ by 11 inches in size, and do not exceed one inch in thickness, exclusive of covers.

2.7.1 When producing books for primary and elementary school students, consideration is given to making the books smaller and otherwise more manageable.

2.8 LINE SPACING. Lines are double spaced or procedures are followed which allow space between lines equal to the height of the capital letters or not less than three sixteenths of an inch.

2.9 LINE WIDTH. With a typewriter meeting the preceding specifications for type size and line spacing, the width of line typed generally does not exceed six inches or 39 letters and spaces.

2.10 MARGINS. The outside and bottom margins are not less than one inch; the top margin is not less than three fourths of an inch; the inner, or gutter, margin is one and one fourth inches wide to allow for binding.

2.11 HYPHENATION. Except for compound words, hyphenation is avoided as much as possible.

2.11.1 It is preferable to produce an uneven or unjustified right hand margin rather than to break words by a hyphen at the end of a line.

2.11.2 Pages do not end with a hyphen.

2.12 ILLUSTRATIONS AND MAPS. When reproduced in a hand transcribed book, illustrations and maps are enlarged and placed, as nearly as possible, in the same relative position as in the original; unnecessary background detail and clutter are eliminated to the extent possible.

2.13 PROOFREADING. Proofreading is done by two persons, whenever feasible, with one reading to the other against the original copy and, where necessary, pages are neatly corrected or retyped before duplication or delivery to the user.

2.13.1 All books produced in the normal workload are proofread and corrected.

2.13.2 Whenever feasible, large print materials intended for immediate use are proofread and corrected; if not, the fact that the materials have not been proofread and corrected is so indicated at the beginning and end.

2.14 WEIGHT OF VOLUME. In planning the production of hand transcribed books likely to exceed 32 ounces, consideration is given to typing or reproducing on both sides of the paper or to dividing the work into two or more volumes.

2.15 MULTIVOLUME WORKS. Each volume of a multivolume work is plainly identified, contains the title page and appropriate section of the table of contents, and has approximately the same number of pages.

2.15.1 The first volume contains the full table of contents.

2.15.2 When appropriate, a separate volume(s) is prepared for the index, glossary, vocabulary, bibliography, appendix or other supplementary material.

2.16 **BINDING.** Hand produced books are satisfactorily bound in metal spiral, plastic comb, loose-leaf, or other binders which allow the book to stay open and lie flat; side stitching is avoided.

2.17 **DUPLICATION OF COPIES.** Provision is made for the duplication of a limited number of copies, either directly by the organization responsible for the original typing in large print, or through cooperative arrangements with other organizations possessing the necessary resources.

2.17.1 Copies produced in multicopy form by office duplication equipment meet the standards for binding (2.16), paper size (2.7) and characteristics (2.6); copies are faithful and clear reproductions of the original typed in large print.

2.17.2 Policies and procedures encourage the return of the original copy of a hand transcribed textbook in good condition so that it may be used as a master for producing additional copies upon request.

2.17.2.1 The student borrower agrees to return the book promptly upon completion of the applicable course.

2.17.2.2 The student also agrees to return the book temporarily while it is still in use if the agency receives a request for an additional copy.

2.17.2.3 Provision is made for ultimate storage of the master copy for as long as indicated.

2.17.3 Any organization or group offering duplicating services furnishes, in writing, a statement of charges and an estimate of time required for supplying material.

2.18 **CONSULTATION.** Provision is made for consultation with various available resources, including the following:

2.18.1 Professional consultation and guidance relative to the needs of individual readers and the qualities of large print materials is sought from ophthalmologists, optometrists, and trained classroom teachers of the partially sighted.

2.18.2 Expert technical advice from office equipment manufacturers, office supply houses, paper dealers, binderies, and other groups in the trade is utilized in order to keep up to date with technological advances.

2.19 **COOPERATION WITH OTHER GROUPS.** The organization cooperates and coordinates its work with other large print producers, libraries, educational programs and central registers.

2.19.1 Clear policies and procedures are established for cooperation with teachers for whose students textbooks are produced.

2.19.2 Educational materials are reported to the Central Catalog of Volunteer Produced Textbooks maintained by the American Printing House for the Blind.[8]

Photo Enlargement

The process of photo enlargement includes rearrangement of existing copy.

2.20 **TYPE SIZE.** The minimum type size of the enlarged copy which is labeled "large print" or "large type" is 16 point.

2.20.1 Greater enlargement to 18, 20 and 24 point size is used when appropriate.

2.20.2 Measurements of type size of the finished product closely approximate precise point size.

2.21 **TYPE.** The original copy from which photo reproductions will be made is sharp and clear.

2.21.1 Small punctuation marks are enlarged and broken letters are retouched carefully.

2.21.2 Reproduction proofs are used whenever feasible.

2.22 **PAPER.** The suitability of paper for photo enlarged books is judged by size, weight, finish, durability, color, reflectance, opacity, and price in relation to the nature of the material to be printed and its intended use.

2.22.1 The finish is dull, text, eggshell, vellum, antique, nonglare.

2.22.2 The color is white, off-white, or a light tint, but not bright white.

2.22.3 Inasmuch as there is no universal book paper suitable for all uses, paper is selected which has appropriate weight and bulk.

2.22.4 Opacity is at least 91 percent.

2.22.5 Paper provides maximum contrast without glare.

[8] American Printing House for the Blind, Box 6085, Louisville, KY 40206.

2.22.6 When printing on both sides of the paper, show-through is eliminated or minimized by using blade coated stock or a heavier weight paper.

2.23 FORMAT. Generally, maximum trim size does not exceed 10½ by 12 inches.

2.24 LINE WIDTH. Generally, the width of a line does not exceed six inches or 39 letters and spaces.

2.25 MARGINS. Margins are not less than three fourths of an inch wide on all four sides.

2.26 ILLUSTRATIONS AND MAPS. Background clutter is eliminated or reduced to the extent feasible.

2.26.1 When practicable, color is used to produce copies which closely resemble the original.

2.27 PROOFREADING. All adaptations, changes and revisions are carefully read by two persons, with one reading to the other against the original copy, and where appropriate, corrections are carefully made.

2.28 WEIGHT OF VOLUME. In planning production of photo enlarged books which may exceed 32 ounces, consideration is given to using a blade coated paper which minimizes show-through (2.22.6) or to dividing the work into two or more volumes (2.29).

2.29 MULTIVOLUME WORKS. Each volume of a multivolume work is plainly identified, contains the title page and appropriate section of the table of contents and has approximately the same number of pages.

2.29.1 The first volume contains the full table of contents.

2.29.2 When appropriate, a separate volume(s) is prepared for the index, glossary, vocabulary, bibliography, appendix or other supplementary material.

2.30 BINDING. The binding is durable and allows the book to stay open and lie flat during use; side stitching is avoided.

2.31 CONSULTATION. The organization makes provision to obtain and use expert technical information and advice from manufacturers, distributors, and dealers in binding, office, and photographic equipment in order to assist in keeping abreast of technological developments and in establishing specifications and cost data.

Typesetting

Typesetting includes resetting as well as original setting.

2.32 **TYPE SIZE.** The minimum type size which is labeled "large print" or "large type" is 16 point.

2.32.1 Larger type sizes such as 18, 20 and 24 point are utilized when appropriate.

2.33 **TYPE FACE.** Type styles are chosen to provide impressions with clean sharp edges and maximum readability such as the following: Baskerville Bold, Caslon Bold, Garamond Bold, Granjon Bold, Old Style No. 7 and Times Roman.

2.33.1 Italics and other thin faced types are avoided.

2.34 **PAPER.** The factors which govern the choice of book paper include: finish, color, size, weight, reflectance, opacity, bulk, durability, and price in relation to the intended use and the nature of the material to be printed.

2.34.1 The finish is dull, text, vellum, eggshell, antique, or nonglare.

2.34.2 The color is white, off-white, or a light tint, but not bright white.

2.34.3 Inasmuch as there is no universal book paper suitable for all uses, paper is selected which has appropriate weight and bulk.

2.34.4 Opacity is at least 91 percent.

2.34.5 Paper provides maximum contrast without glare.

2.34.6 When printing on both sides of the paper, show-through is eliminated or minimized by using blade coated stock or a heavier weight paper.

2.35 **FORMAT.** Maximum trim size does not exceed 10½ by 12 inches.

2.35.1 When producing books for primary and elementary school students, however, consideration is given to making the books smaller and otherwise more manageable.

2.36 **LEADING.** Spacing between lines is generally not less than one fourth of the height of the type (e.g. in 16 point type, the leading or space is four point).

2.37 LINE WIDTH. The width of a line does not exceed 36 picas (six inches) or 39 lower case letters and spaces.

2.37.1 Two columns to the page are preferred to extra-wide lines.

2.38 MARGINS. Margins are not less than three fourths of an inch wide on all four sides.

2.39 HYPHENATION. Except for compound words, hyphenation is avoided as much as possible.

2.39.1 Pages do not end with a hyphen.

2.40 ILLUSTRATIONS AND MAPS. Line drawings and engravings containing wide open spaces between lines are utilized, whenever possible, rather than halftone illustrations.

2.41. PROOFREADING. Adequate procedures are followed to ensure that errors are caught and corrected.

2.41.1 One person reads aloud from the original copy while a second person checks the proof.

2.41.2 An editor then reads the proof and sees that final corrections are made.

2.41.3 Each line in which a correction has been made is thoroughly rechecked to prevent new errors from being introduced.

2.42 WEIGHT OF VOLUME. The weight of a volume does not exceed 32 ounces.

2.43 MULTIVOLUME WORKS. Each volume of a multivolume work is plainly identified, contains the title page and appropriate section of the table of contents, and has approximately the same number of pages.

2.43.1 The first volume contains the full table of contents.

2.43.2 When appropriate, a separate volume(s) is prepared for the index, glossary, vocabulary, bibliography, appendix or other supplementary material.

2.44 BINDING. The binding is durable and allows the book to stay open and lie flat during use; side stitching is avoided.

2.45 CONSULTATION. In addition to obtaining professional advice from ophthalmologists and optometrists, technical guidance is sought and utilized from book designers, typographers, printers, binders and other groups in the trade to facilitate quality production.

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LARGE PRINT MATERIALS

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For addresses, see Directory of Periodicals, Publishers and Reference Sources Mentioned in this Volume, page 59.

3.

RECORDED

MATERIALS

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3. RECORDED MATERIALS

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3. Recorded Materials

Introduction

Recorded reading materials for the visually handicapped are produced in the United States primarily by three types of groups:

A. *Volunteers* in a formal or organized reading program who record complete educational or recreational texts intended to reach many readers. Recording is done

i. exclusively on the premises of the recording organization in professionally equipped recording studios;

ii. on the premises of the recording organization in professionally equipped recording studios and at home or in other locations which are not professionally equipped recording studios; or

iii. exclusively at home or in other locations which are not professionally equipped recording studios.

B. *Paid professionals* who record complete books and magazines, intended to reach many readers, in professionally equipped studios such as those used for the Talking Books Program of the Library of Congress and by commercial producers.

C. *Home reader volunteers* who record parts of or complete texts independently at home or in other locations which are not professionally equipped recording studios, usually for the use of one reader or for very limited distribution.

These standards are designed primarily for organizations in categories A and B; however, it is hoped that volunteers in category C will also follow them as closely as possible in the general effort to produce recorded reading materials of the highest feasible quality.

The standards were worked out also with an eye toward a future national repository of recorded educational materials to which organizations would contribute master tapes from which requested copies could be made quickly on high speed tape duplicating equipment for any number of users. The repository could also be a central reference point for users and for recording organizations to avoid unnecessary recording of titles already stocked.

The standards are designed to provide visually handicapped readers with recorded books which approximate as closely as feasible the quality of the ink print text; which are clearly, comprehensibly and accurately read; and which are recorded and reproduced in a uniform format and in accordance with the highest feasible standards of sound reproduction. These standards were formulated in recognition that technological advances might require future revision based on developments in equipment, materials and procedures for compressed speech recordings.

The standards which follow are no substitute for a comprehensive manual on the many details which are involved in the production of recorded materials. Samples of such manuals are noted in the references following these standards. It would be highly desirable for a comprehensive production manual to be developed based on nationwide experience, to guide individual producers.

3.1 GENERAL POLICIES AND PRINCIPLES. All production is accomplished in compliance with the general policies and principles numbered 1.1 through 1.6.

3.2 READER. The reader is able to present, orally, printed matter for quality reproduction in recorded form.

3.2.1 The ability of a reader is measured by a reading and recording test which is evaluated by a person competent to determine whether the reader satisfactorily demonstrates the following characteristics:

3.2.1.1 A listenable voice and presentation.

3.2.1.2 Fluency, ease and good command of the spoken language.

3.2.1.3 The ability to use correct pronunciation.

3.2.1.4 An awareness of the manner in which words fit together for good verbal expression.

3.2.1.5 The ability to communicate accurately the thoughts and ideas set forth in printed matter.

3.2.1.6 Clear and distinct enunciation which is readily understandable.

3.2.1.7 Avoidance of declamatory, patterned or monotonous speech.

3.2.1.8 The ability to read at a pace which is appropriate to the text.

3.2.1.9 A familiarity with the subject matter and vocabulary, especially when reading highly technical and specialized material.

3.2.2 Provision is made for continued evaluation of home readers by periodically returning to such readers annotated test tapes that serve as guidelines for future recording and as checks on the technical quality of recording.

3.3 PROOFREADING. The organization regularly proofreads by one or more of the following methods, as appropriate:

3.3.1 In simultaneous monitoring, two persons, a reader and a monitor, both of whom are familiar with the material being recorded, work together as a team during the recording process.

3.3.1.1 The monitor checks the reader for accuracy, pronunciation and overall reading performance, stopping the reader as necessary to make corrections on the tape.

3.3.2 In delayed monitoring, the tape is carefully checked, word by word, against the printed text to insure that discrepancies are noted and corrected.

3.3.2.1 For general reading material, the monitor and the reader are two different persons.

3.3.2.2. For highly specialized and technical material, when a qualified second person is not available to act as a monitor, the reader may do his own proofreading and correcting.

3.3.3 Spot checking is used for recording reading matter only when simultaneous or delayed monitoring is not feasible.

3.3.3.1 Clear corrective procedures are followed to make proofreading by this method as effective as possible.

3.3.4 The method of proofreading used is related to the nature of the recorded material and the number of copies to be produced.

3.3.4.1 Recorded educational materials intended for multicopy distribution are proofread by either simultaneous or delayed monitoring.

3.3.4.2 Recorded recreational materials intended for multicopy distribution are proofread by either simultaneous or delayed monitoring whenever possible; however, spot checking may be used.

3.3.4.3 Whenever feasible, recorded materials intended for immediate distribution are proofread in accordance with one of the three methods; if not, the user is advised that the material has not been proofread.

3.4 TECHNICAL STANDARDS FOR MASTER TAPES. When recording for multicopy distribution, the following technical standards are met in producing master tapes:

3.4.1 Tapes are recorded at three and three quarters inches per second.

3.4.2 Tapes used are:

3.4.2.1 One fourth of an inch wide.

3.4.2.2 Not less than one mil in thickness.

3.4.2.3 First line, audio quality.

3.4.2.4 Backed with polyester or poly-vinyl-chloride.

3.4.2.5 Not labeled "high output."

3.4.3 Maximum recording time per track conforms to the following specifications:

Manufacturer's stated footage	Manufacturer's stated recording time per track (in minutes at 3¾ inches per second)	Maximum recording time per track (in minutes at 3¾ inches per second)
300	15	14
600	30	29
900	45	44
1200	60	58
1800	90	88

3.4.4 Tapes are recorded on either two or four tracks according to current R.I.A.A. standards.[1]

3.4.4.1 If four tracks are recorded, the sequence of tracks is 1, 4, 3, 2.

3.4.5 Open reels do not exceed seven inches in diameter.

3.4.6 At least ten seconds of blank tape is left at the beginning and the end of recorded information on each track exclusive of leader.

3.4.7 A good quality fixed (stationary) or lavaliere microphone is used.

[1] *Standards for Magnetic Tape Records,* Record Industry Association of America, Bulletin No. E5 (1968) One East 57th Street, New York, NY 10022.

3.4.7.1 It is compatible with the tape recorder.

3.4.7.2 The microphone faces the reader directly.

3.4.8 The fixed (stationary) microphone is:

3.4.8.1 Generally not closer than six inches nor farther than twelve inches from the reader.

3.4.8.2 On a separate surface from the recorder.

3.4.9 Care is taken to isolate the lavaliere microphone and cord from noise created by clothing and body movements; a soft terry cloth bib is often used for this purpose.

3.4.10 Recordings are free from audible wow and flutter.

3.4.11 Recordings do not exceed zero V.U. (volume units) at maximum peak.

3.4.12 Equipment and the tape used are selected and maintained to:

3.4.12.1 Minimize excessive wow, flutter, sibilance, noise, hum and other distortion.

3.4.12.2 Record frequencies uniformly from 500 to 5000 hertz (cycles per second) within plus or minus three decibels, as calibrated by a standard tape.

3.4.13 Appropriate procedures are established and followed for periodic checking and servicing of equipment by competent technicians.

3.4.14 Clear written instructions are provided to unsupervised readers concerning their responsibilities for such maintenance procedures as cleaning and demagnetizing recording heads.

3.5 **COOPERATION WITH OTHER GROUPS.** The organization cooperates and coordinates its work with other producers of recorded materials, libraries, educational programs and central registers.

3.5.1 Clear policies and procedures are established for cooperation with teachers for whose students textbooks are produced.

3.5.2 Educational materials are reported to the Central Catalog of Volunteer Produced Textbooks maintained by the American Printing House for the Blind.[2]

3.5.3 General interest materials are reported to the Union Catalog maintained by the Division for the Blind and Physically Handicapped of the Library of Congress.[3]

[2] American Printing House for the Blind, Box 6085, Louisville, KY 40206.
[3] Division for the Blind and Physically Handicapped, Library of Congress, 1291 Taylor Street N.W., Washington, DC 20542.

3.6 **REPRODUCING TAPES.** The organization is able to reproduce, by means of a tape duplicator, a copy of any work upon request; or it deposits a master copy of the complete work with a recognized depository.[4]

3.6.1 Tape copies are technically the equivalent of the master tape.

3.6.2 Tape copies are compatible with generally available playback equipment.

3.6.3 Any organization or group offering duplicating services furnishes in writing, upon request, a statement of charges and an estimate of time required for supplying material.

3.7 **PRODUCTION OF DISCS.** Standards used by the Library of Congress in its Talking Book Program are followed in producing pressed discs.[5]

[4] Until a nationally recognized depository is established, Recording for the Blind, 215 East 58th Street, New York, NY 10022, has agreed to accept master tapes of textbooks on all educational levels and, upon request, to duplicate and provide tape copies on a loan basis without charge.

[5] *Specifications for Talking Book Records*, Division for the Blind and Physically Handicapped, Library of Congress, 1291 Taylor Street N.W., Washington, DC 20542 (1968).

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For addresses, see Directory of Periodicals, Publishers and Reference Sources Mentioned in this Volume, page 59.

4.

TACTILE

MATERIALS

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4. TACTILE MATERIALS

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4. Tactile Materials

Introduction

At least four different methods, each requiring entirely different equipment, are currently used in the United States to produce braille materials:

(1) Braille presses produce two-side or interpoint multicopy printing from embossed metal plates;

(2) Some equipment utilizes hand set braille type slugs;

(3) Hand transcribers emboss directly on paper by means of a braillewriter, electric braille typewriter, or slate and stylus to produce single copies of one-side braille;

(4) Vacuum-forming duplication provides one-side multiple copies from hand transcribed paper masters.

Presently coming into use is the embossing of braille by printing on high speed computer-directed machines. This method for the production of general braille literature is technically feasible. But cost, quality, organization, coordination of effort, and national needs are likely to determine the degree to which it will be utilized.

Among other promising technological developments on the horizon are a video scanning device which produces braille-like touch signals directly from ink print, and a machine which produces moving braille characters from magnetic tape.

Braille readers have the right to expect that all materials, produced by any method, be faithful reproductions of the original ink print text, and be accurately embossed in accordance with the rules of the various braille codes set forth by the Braille Authority as approved by the American Association of Workers for the Blind and the Association for Education of the Visually Handicapped.

In addition, these materials should conform to established standards with regard to the size, height and spacing of dots and lines; the quality and thickness of paper; page sizes for various types of materials, age groups and common shelving facilities; quality and types of bindings;

and mailing containers. Due attention should also be given to methods of reducing overall bulk and weight of the finished product.

It should be noted that the following standards are designed primarily for production of books, pamphlets or magazines—materials which are most suited to multicopy distribution. Other braille materials intended mostly for individual use in correspondence, notes, and so forth, may be produced in accordance with the specifications of the user; in general, however, braille materials which adhere to these standards will have the widest acceptance.

Because research on the production of embossed reproductions of maps and diagrams is still in the developmental stage, it seemed premature to formulate standards in this area at this time. The Braille Authority is mindful of this lack, and development of standards for embossed graphic material is on its list of priorities for the future.

The need for more comprehensive manuals, especially to guide individual braille transcribers, is recognized. Some samples of manuals now in use are listed among the references following these standards.

General Standards

4.1 GENERAL POLICIES AND PRINCIPLES. All production is accomplished in compliance with the general policies and principles numbered 1.1 through 1.6.

4.2 CONFORMANCE WITH BRAILLE CODES. Braille is produced in full conformance with the currently applicable codes set forth by the Braille Authority and approved by the American Association of Workers for the Blind and the Association for Education of the Visually Handicapped.[1]

4.2.1 Inasmuch as the Braille Authority has not, at this time, adopted standards for the reproduction of maps and diagrams, a producer of braille is responsible for making understandable embossed reproductions or clear verbal descriptions of their contents.

[1]These codes are: *Code of Braille Textbook Formats and Techniques, English Braille American Edition, The Nemeth Code of Braille Mathematics and Scientific Notation,* and *Revised International Manual of Braille Music Notation.* For information on copies of these codes, write to American Printing House for the Blind, Box 6085, Louisville, KY 40206.

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4.6 TEXTBOOKS IN MULTIPLE COPIES. When there is an apparent need for more than fifty copies of a particular textbook, its publication in braille is undertaken whenever possible by a braille press rather than by hand transcription.

4.7 COOPERATION WITH OTHER GROUPS. The organization cooperates and coordinates its work with other braille producers, libraries, educational programs and central registers.

4.7.1 Clear policies and procedures are established for cooperation with teachers for whose students textbooks are produced.

4.7.2 Educational materials are reported to the Central Catalog of Volunteer Produced Textbooks maintained by the American Printing House for the Blind.[2]

4.7.3 General interest materials are reported to the Union Catalog maintained by the Division for the Blind and Physically Handicapped of the Library of Congress.[3]

Hand Transcribing of Braille

The importance of the volunteer braille transcriber in the production of reading matter for blind persons cannot be overemphasized.

Press made braille books are utilized to meet the popular, and sometimes transitory, demand for current general literature. Presses are also employed to produce widely used textbooks. While the volunteer makes a significant supplementary contribution in these areas, his unique value lies in his ability to meet specialized and individual needs for a wide variety of material.

The infinite diversity of such needs may be indicated by just a few illustrations: textbooks and supplementary reading for elementary, secondary and college students where the demand is not great enough to justify the expense of press brailling; vocational and professional literature which might be helpful or necessary to an individual in such fields as music, mathematics, law, data processing, teaching, social work, business, or other fields in which it is necessary to keep up with current trends

[2] American Printing House for the Blind, Box 6085, Louisville, KY 40206.
[3] Division for the Blind and Physically Handicapped, Library of Congress, 1291 Taylor Street N.W., Washington, DC 20542.

and technical developments; cookbooks and other helps for homemakers; and objective information about issues and candidates at election time.

The demand for volunteer activity is likely to grow even more in importance as volunteers increase in number and competence and their skills become more diversified.

Far more than most other volunteer activities, braille transcribing demands specific aptitudes and educational backgrounds, long and intensive training, and patient concentration on detail. The rules are complicated and highly technical, and it is imperative that one who engages in it must either have, or be able to acquire, an understanding of the rules of grammar, word structure, syllabication, and the diacritical symbols used in dictionaries. In specialized areas, a thorough grounding in the particular subject matter is sometimes imperative and always desirable. For these reasons, volunteer braillists must be selected and trained with great care, and their work continuously supervised and checked.

4.8 **RECRUITMENT OF TRANSCRIBERS.** No rigid qualifications for enrollment in a class on braille transcribing are established.

4.8.1 At the beginning of the course, the candidate transcriber is fully informed of training requirements and of the quality and quantity of production that will be expected after successful completion of the course.

4.8.2 Transcribers are willing and able to devote sufficient time to produce a minimum average of 60 pages of braille per month.

4.9 **TRAINING.** Braille transcribing courses are designed to ensure that fully trained transcribers:

4.9.1 Use a dictionary effectively and know the meanings of the various symbols and abbreviations empioyed in dictionaries.

4.9.2 Are thoroughly familiar with word structures and components.

4.9.3 Are thoroughly familiar with and able to apply the rules of braille transcribing as set forth in the official braille codes (4.2).

4.9.4 Are well acquainted with techniques of braille proofreading.

4.9.5 Trainees who have not shown a sufficient aptitude for braille transcribing are so informed, and are encouraged to participate in such other areas of service as binding, duplicating braille materials by the vacuum-forming process, or preparing recorded or large print materials, if they meet the qualifications for such activities.

4.10 CERTIFICATION. Transcribers engaged in the production of braille literature and textbooks or braille music are certified by the Library of Congress.

4.10.1 Certification may be achieved through the correspondence courses conducted by the Library or through instruction by a qualified teacher elsewhere, and submission of trial manuscripts acceptable to the Library of Congress.

4.10.1.1 A manuscript submitted to the Library of Congress for approval is entirely the work of the candidate for certification and has not been proofread or corrected by the instructor or anyone else.

4.10.1.2 The instructor may, however, evaluate the manuscript and advise the student as to whether or not the quality of the work justifies its submission.

4.11 REFRESHER TRAINING. Refresher training is provided as appropriate.

4.11.1 Refresher courses are provided for certified transcribers whose proofreader's reports indicate a need for such training.

4.11.2 Workshops are provided to keep transcribers up to date by reviewing any changes made in the applicable official braille codes or related topics.

4.12 QUALIFICATIONS OF INSTRUCTORS. The basic requirements for an instructor of braille transcribing include the following:

4.12.1 Certification by the Library of Congress.

4.12.2 At least two years' experience as an active transcriber.

4.12.3 Production of at least 2000 pages of acceptable braille.

4.12.4 For specialized areas, an adequate knowledge of the subject matter and mastery of the applicable braille rules.

4.13 SUPERVISION. A supervisor of transcription is designated to receive requests for transcribing, to coordinate the planning and assignments for brailling, to maintain quality standards, and to assure continuity of service, particularly when one work is assigned to more than one transcriber.

4.13.1 Specialized material, such as textbooks, music, and foreign languages, are assigned, preferably, to those having a basic knowledge of the subject matter.

4.13.1.1 Mastery of the rules of the applicable braille code is required of the transcriber.

4.13.2 An individual record or file is maintained for each transcriber; this contains a registration card or application form, certification status, special braille code proficiencies, performance evaluations and a record of production.

4.14 PHYSICAL FACILITIES. Adequate space is provided for the undisturbed conduct of classes and consultation, and for necessary equipment, supplies and reference materials.

4.15 EQUIPMENT AND SUPPLIES. The embossing equipment used produces braille meeting the standards for dot height, size, and spacing (4.3).

4.15.1 Each trainee and transcriber has access to a braillewriter or slate and stylus.

4.15.2 Paper of appropriate quality is readily available.

4.15.2.1 The weight of paper is not less than 80 pound.

4.15.2.2 The size of paper permits page size that does not exceed 11 inches high and 11½ inches wide.

4.16 REFERENCE MATERIALS. The following reference materials are available to transcribers:

4.16.1 The latest editions of official braille codes and rule books (4.2).

4.16.2 Up to date instruction manual(s).

4.16.3 Dictionaries approved by the Braille Authority as indicated in the current editions of the various official code books.

4.17 PROOFREADING. All books are proofread by a transcriber or proofreader certified by the Library of Congress (4.10) except when time does not permit this to be done for immediately needed educational materials.

4.17.1 After such immediately needed educational materials have served their original purpose, they are recalled for proofreading and correction if further use is to be made of them.

4.17.2 Transcribers pre-proofread their own work.

4.17.3 Whenever feasible, books in foreign languages are proofread by persons having at least a basic knowledge of the particular language.

4.17.4 Whenever feasible, specialized materials (such as science textbooks and music) are proofread against original copy by persons who are conversant with the subject matter and who are familiar with the rules of the applicable braille code (4.2).

4.17.5 Preference is given to blind proofreaders.

4.17.6 A typewritten report is made by the proofreader on every book assigned to him; a copy of the report is sent to the supervisor of transcription as well as to the transcriber.

4.17.6.1 Proofreaders' reports inform the transcriber, objectively and in detail, of the number and nature of the errors noted, and, in case of rule violations, specify and explain the particular rules involved.

4.17.7 Non-volunteer proofreaders are paid adequate compensation for their work on the basis of the number of pages proofread.

4.17.7.1 A higher rate per page is paid for specialized proofreading.

4.17.7.2 Where proofreaders are expected to recopy pages containing serious errors, extra compensation is given for pages recopied.

4.17.8 Assignments for the transcription of immediately needed educational material, for which proofreading time is not available, are limited to transcribers who have demonstrated accuracy in transcribing and ability in self-proofreading.

4.17.8.1 All transcriptions not proofread should be so designated in braille in the book itself, and so reported to the appropriate central agency (4.7.2 and 4.7.3).

4.18 **CORRECTION OF ERRORS.** All errors noted or marked by the proofreader are corrected.

4.18.1 In making corrections, erasures that extend beyond a single cell or result in a blank space are not permitted.

4.18.1.1 Where corrections require more extensive erasures, the page is recopied.

4.19 **DUPLICATION OF COPIES.** Provision is made for the duplication of a limited number of copies, either directly by the organization responsible for the original production, or through cooperative arrangements with other organizations possessing the necessary resources.

4.19.1 Copies reproduced in multicopy form by the vacuum-forming process using plastic sheets meet the standards for dot specification (4.3) and page size (4.20.1).

4.19.2 Policies and procedures encourage the return of the original copy of a hand transcribed textbook in good condition so that it may be used as a master for producing additional copies upon request.

4.19.2.1 The student borrower agrees to return the book promptly upon completion of the applicable course.

4.19.2.2 The student also agrees to return the book temporarily while it is still in use if the agency receives a request for an additional copy.

4.19.2.3 Provision is made for ultimate storage of the master copy for as long as indicated.

4.19.3 A policy is established, in writing, concerning charges, if any, to be made for providing duplicated copies.

4.19.4 An adequate number of personnel is available to meet stated production requirements for the duplication of limited numbers of copies of books.

4.19.5 The producing organization itself need not store masters and provide duplicates of educational materials (4.19.2.3) if it deposits the masters with the following central depositories which are able to furnish copies upon request.

4.19.5.1 Braille masters of textbooks on the elementary and secondary levels are deposited with the Thermoform Department, American Printing House for the Blind.[4]

4.19.5.2 Braille masters of college textbooks and professional reference works are deposited with the Braille Book Bank, National Braille Association.[5]

4.20 **PAGES.** Pages conform to the following specifications:

4.20.1 The pages of hand transcribed books do not exceed 11 inches in height and 11 or 11½ inches in width.

4.20.1.1 The margins at the top, bottom and outside edges of the pages are at least three eighths of an inch, and at the binding edge the margin is not less than three fourths of an inch after binding.

[4] American Printing House for the Blind, Box 6085, Louisville, KY 40206.
[5] National Braille Association, 85 Godwin Avenue, Midland, NJ 07432.

4.20.2 The maximum number of cells per line is 41.

4.20.3 The number of lines per page is not more than 25.

4.20.4 Certain technical or specialized books may vary, when appropriate, from these standards.

4.21 **PAGES PER VOLUME.** The maximum number of pages for a one-side, hand transcribed volume is 90 pages.

4.22 **BINDINGS.** Binding adequately protects the braille embossing and keeps the pages intact while allowing them to lie flat for reading.

4.22.1 Hand transcribed volumes, particularly duplicated copies, are bound in sturdy covers.

4.22.2 Ink print, typewriter lettering or raised roman type and braille identifications are imprinted on the covers of all bindings.

Press Produced Braille Materials

4.23 **EQUIPMENT.** Equipment is designed and maintained to produce high quality braille materials consistently and efficiently.

4.23.1 The equipment produces materials which conform to the standards for physical specifications for dots and spacing (4.3).

4.24 **PAPER.** Paper used is neither so thin as to produce dots which are broken at the top, nor so thick as to cause low or uneven dots.

4.24.1 Paper for books for general use is not less than 80 pound weight.

4.24.2 Paper for manuals for the teaching of braille reading is not less than 90 pound weight and is preferably 100 pound.

4.24.3 Paper for magazines is not less than 70 pound weight, possesses a quality and tensile strength that will produce firm dots which will not be cut through the top in the printing process, and will go through the mails with a minimum of damage.

4.25 PAGES. Pages conform to the following specifications:

4.25.1 The pages of bound books of general literature and textbooks do not exceed 11 inches in height and 11 inches in width.

4.2. .1 The margins at the top, bottom and outside edges of the page are at least three eighths of an inch, and at the binding edge, to enable the reader to get to the center of the book with ease, the margins are not less than three fourths of an inch after binding.

4.25.2 The pages of magazines do not exceed 13½ inches in height and 11 inches in width.

4.25.3 There are 36 or 38 cells per line in press made books.

4.25.4 There are no more than 25 lines per page in general literature and textbooks.

4.25.5 Certain technical or specialized books may vary from these standards.

4.26 BINDINGS. Bindings adequately protect the braille embossing and permit the pages to lie sufficiently flat for reading.

4.26.1 Bindings of braille books are suited to the thickness of the volumes, to the use to which the books will be put, and to the safeguarding of the height of the braille dots.

4.26.1.1 Generally speaking, press printed books are durably bound in cloth covered board bindings, using a .90-point Davey board or Dupont 2500 imitation leather covercloth, their equivalent or better. (Linear polyethylene plastic material offers acceptable quality.)

4.26.2 Bindings for pamphlets may consist of heavy paper (preferably jute) covers, with plastic comb bindings or saddle stitching, depending on size and number of pages.

4.26.3 Bindings for magazines are the same as those for saddle stitched pamphlets, with either special heavy paper or plastic covers, or self covers.

4.26.4 Ink print (or raised roman type) and braille identifications are imprinted on the covers.

4.26.4.1 Covers of books have durable and securely affixed imprints.

4.26.4.2 Pamphlets may, in special cases, carry only braille identifications.

4.27 **PAGES PER VOLUME.** In general, the thickness of a braille volume is limited, because of bulk and weight, to not more than 250 pages for an interpoint press printed volume.

4.27.1 In the case of large works, such as dictionaries and encyclopedias, the maximum number of pages of interpoint is approximately 300 pages, provided such volumes are bound in heavy cloth covered board or plastic covers with metal ring binding elements riveted into the cover.

4.27.2 In general, magazine volumes do not exceed 100 interpoint pages.

4.28 **MAILING CONTAINERS.** Mailing containers are of a quality to protect braille materials through the mails without damage.

4.28.1 The type of mailing container used for the circulation of braille books is generally the responsibility of the lending library or agency; the braille printer's only responsibility is the bulk shipment of books from the printing plant to the lending library or distributing agency in such fashion that books arrive in good condition.

4.28.2 Most magazines go out to the readers directly from the printer, and it is the responsibility of the printer to package them in such a manner as to protect them from damage in the mails.

4.28.3 Magazines consisting of a single volume of 100 pages or less are mailed in strong kraft envelopes.

4.28.4 Magazines consisting of two or more volumes are packaged in strong corrugated boxes of suitable size, or in suitable padded bags in which the braille materials do not shift about.

4.28.5 All addresses and return address legends on braille magazines conform to the requirements of current U.S. Postal Regulations.

4.29 **STOCK.** Braille publishers of textbooks make provision to maintain sufficient stocks of these publications to enable them to make delivery on demand.

4.30 **PROOFREADING.** All press made books are proofread against the original copy to assure accuracy of transcription.

4.31 **STEREOTYPISTS AND PROOFREADERS.** Stereotypists and proofreaders employed in the production of press braille publications are certified by the Library of Congress.

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For addresses, see Directory of Periodicals, Publishers and Reference Sources Mentioned in this Volume, page 59.

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